Q2) Implement Queue using Linked List

```
// Online C compiler to run C program online
#include <stdio.h>
#include <stdlib.h>
struct Node {
    int val;
    struct Node *next;
};
void insert(struct Node* *node, int value);
void delete(struct Node* *node);
void display(struct Node* *node);

int main() {
    int choice, value;
    struct Node* *head = NULL;
    do {
        printf("\nMenu : \n");
        printf("1. Push\n2. Pop\n3. Display\n4. Exit\n");
        printf("Enter your choice : ");
        scanf("%d",&choice);
        switch(choice) {
            case 1 : printf("Enter the value to insert : ");
                scanf("%d",&value);
                insert(&head, value);
                break;
            case 2 : delete(&head);
                    break;
            case 3 : display(&head);
                    break;
            case 4 : return;
            default : printf("Invalid choice");
        }

    }while(choice != 4);
}
void insert(struct Node* *node, int value) {
    if(*node == NULL) {
        struct Node* new_node = (struct Node*)
malloc(sizeof(struct Node));
        new_node->val = value;
        *node = new_node;
        return;
    }
    struct Node* new_node = (struct Node*)malloc(sizeof(struct
Node));
    new_node->val = value;
    new_node->next = *node;
    *node = new_node;
}
void delete(struct Node* *node) {
    if(*node == NULL) {
        printf("Queue is empty");
        return;
    }
    struct Node* temp = *node;
    if(temp->next == NULL) {
        free(temp);
```

```
        *node = NULL;
        return;
    }
    while(temp->next != NULL && temp->next->next != NULL) {
        temp = temp->next;
    }
    free(temp->next);
    temp->next = NULL;
}
void display(struct Node* *node) {
    struct Node* temp = *node;
    printf("Contents of Queue : ");
    while(temp != NULL) {
        printf("%d  ",temp->val);
        temp = temp->next;
    }

}
ouput :
```

```
Menu :
1. Push
2. Pop
3. Display
4. Exit
Enter your choice : 1
Enter the value to insert : 1
Menu :
1. Push
2. Pop
3. Display
4. Exit
Enter your choice : 1
Enter the value to insert : 2
Menu :
1. Push
2. Pop
3. Display
4. Exit
Enter your choice : 1
Enter the value to insert : 3
Menu :
1. Push
2. Pop
3. Display
4. Exit
Enter your choice : 3
Contents of Queue : 3  2  1
Menu :
1. Push
2. Pop
3. Display
4. Exit
Enter your choice : 2
Menu :
1. Push
2. Pop
3. Display
4. Exit
Enter your choice : 3
Contents of Queue : 3  2
```